

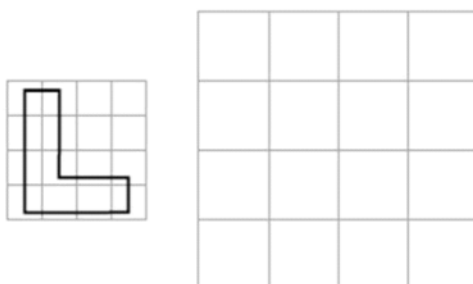
4.1 Enlargements and Reductions

An **enlargement** is an increase in the dimensions of an object by a constant factor. It can be 2-D or 3-D.

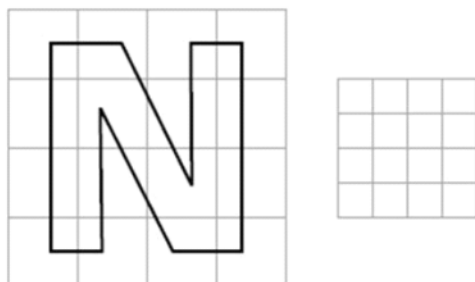
An **reduction** is a decrease in the dimensions of an object by a constant factor. It can be 2-D or 3-D.

The **scale factor** is the constant factor by which all of the dimensions of an object are enlarged or reduced in a scale drawing.

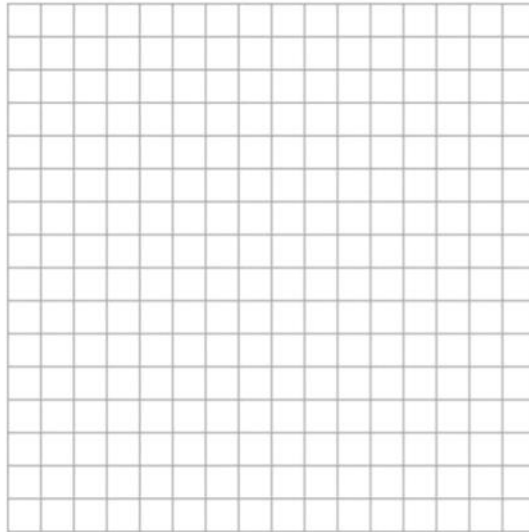
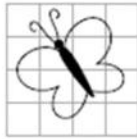
How could we use the grid paper below to enlarge the letter L by a factor of 2?



How could we use the grid paper below to reduce the letter N by a factor of 0.5?



Draw an enlargement of the butterfly using a scale factor of 4.







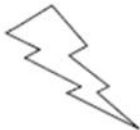
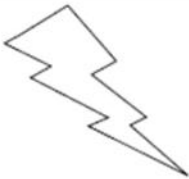
Fill in the blanks with the words below

constant enlargement larger reduction scale factor smaller

- a) A scale factor greater than 1 indicates a(n) _____, which results in an image that is the same shape but proportionally _____ than the original.
- b) A scale factor less than 1 indicates a(n) _____, which results in an image that is the same shape but proportionally _____ than the original.
- c) The _____ is the _____ amount by which all dimensions of an object are enlarged or reduced in a scale drawing.

For each image in column A, state whether the image in column B has a scale factor

- greater than 1
- less than 1
- equal to 1

	A	B
a) _____		
b) _____		
c) _____		

ASSIGNMENT: 4.1 Extra Practice